

## Claims

We claim:

1. A method for improving throughput in a wireless local area (WLAN), the method comprising the steps of:  
5        buffering a set of messages;  
         identifying a target address for the set of messages; and  
         concatenating the set of messages based on the target address.
2. The method of claim 1 wherein the step of concatenating further  
10       comprises the steps of:  
         (a) eliminating a sync interval;  
         (b) preserving a message header;  
         (c) transmitting a subsequent message;  
         (d) transmitting the message header; and  
15       (e) repeating steps (a) through (d), until a last subsequent message in the set of messages have been sent.
3. The method of claim 2 wherein the step of preserving further comprises the step of preserving a start of frame delimiter (SFD) and transmitting the SFD.  
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4. The method of claim 1 wherein the message is identified as a MAC protocol data unit (MPDU) type message.
5. The method of claim 1 wherein the message is identified as a PLCP  
25       protocol data unit (PPDU) type message.
6. The method of claim 1 wherein the step of concatenating based on the target address comprises identifying the target address as an unicast type address.

7. The method of claim 1 wherein the step of concatenating based on the target address comprises identifying the target address as a broadcast type address.

8. The method of claim 1 wherein the step of concatenating based on the target address comprises identifying the target address as a multicast type address.

9. The method of claim 1 wherein the step of concatenating based on the target address comprises identifying the target address as an unicast type address, a broadcast type address and a multicast type address.

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10. A method for improving throughput in a wireless local area (WLAN), the WLAN comprising a plurality of mobile station having diversity receivers and a set of messages, a method comprising the steps of:

replicating a first signal path and a second signal path in the diversity receivers;  
determining an energy level of the first signal path and the second signal path; and  
choosing the best path based on the energy level to recover the set of messages.

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11. The method of claim 10 wherein the step of choosing the best path based on the energy level to recover the set of messages, comprises decoding the incoming RF signal of the first signal path and the second signal path continuously.

12. A diversity receiver for improving the throughput in a wireless local area network, the diversity receiver having a first signal path and a second signal path, comprising:

- 5 a first energy detector, a first start of frame delimiter (SFD) detector and a first parser for receiving the first signal path; and
- a second energy detector, a second SFD detector and second parser for receiving the second signal path.

13. The diversity receiver of claim 12 wherein a timing control unit
- 10 continuously chooses between the first signal and the second signal based on continuous feedback from the first energy detector and the second energy detector in order to recover a set of messages.